

3

Pennsylvania

PSSA

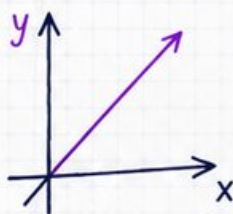
GRADE

7

MATH

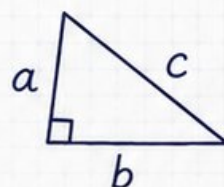
PRACTICE TESTS

✓ Standards Aligned
Problem Solving
For Comprehensive
Assessment Programs



$$y = mx + b$$

$$\frac{2}{3}x - \frac{4}{5} = \frac{1}{2}$$



$$3(x - 2) = 2x + 5$$



3 PRINTED TESTS



2 ONLINE TESTS



USE THESE TWO
ADDITIONAL ONLINE
PRACTICE TESTS
FOR EXTRA REVIEW AFTER
THE PRINTED TESTS
IN THIS BOOK.



Build
Confidence



Strengthen
Math Skills



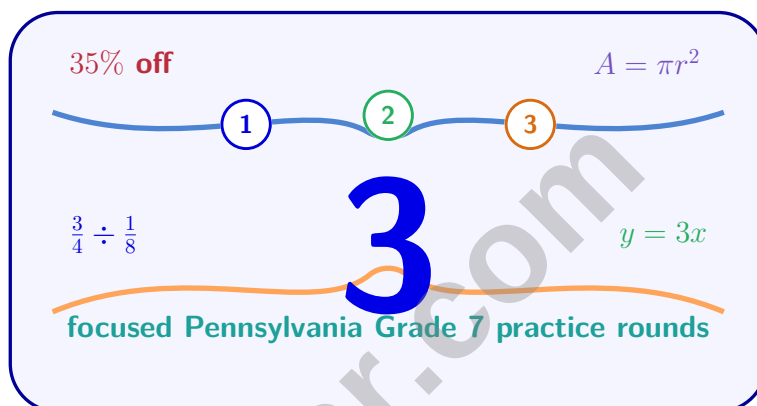
Detailed Answers
& Explanations



Improve Test
Performance

3 Pennsylvania PSSA Grade 7 Math Practice Tests

Pennsylvania Practice with Standards Codes, Keys, and Explanations



Three complete 40-question Grade 7 PSSA practice rounds with proportional relationships, percents, rational numbers, expressions, equations, geometry, statistics, probability, answer keys, and clear explanations for every item.

Jay Daie and Reza Nazari



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Welcome, Pennsylvania Grade 7 Problem Solver!

Three focused rounds for sharper PSSA math thinking

This book gives you three full Grade 7 PSSA math practice tests. Each round is built to help you notice structure, compare quantities, use proportional reasoning, handle rational numbers, and explain your thinking with care.

Your Pennsylvania Practice Promise

I will read every question carefully, choose a strategy that fits, write enough work to prove my answer, and use corrections as training for the next test.

Read

Model

Verify

How to Use This Book

A three-session plan for confident Grade 7 review

1. **Warm up with the review pages.** Notice the big ideas before starting the tests.
2. **Complete one test at a time.** Treat each 40-question round like a real practice session.
3. **Show your reasoning.** Jot a proportion, equation, diagram, number line, or quick estimate when it helps.
4. **Correct actively.** Rework missed items before reading the explanation.
5. **Choose the next target.** After each test, name one skill and one habit to improve.

Pennsylvania review rhythm: Work a test, score it, study your misses, then come back ready for the next round with one clear goal.



What Is Inside?

Three PSSA tests, 120 questions, and a focused review path

Part	What You Will Practice
Tests 1–2	Proportional relationships, unit rates, percents, rational-number operations, and careful reading.
Test 3	Expressions, equations, inequalities, scale drawings, geometry, data, probability, and multi-step problem solving.
Answer Pages	Compact keys and explanations that show why each answer works.

The tests are mixed on purpose. Grade 7 success means recognizing which idea is being tested even when the next question changes format.



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& answers

Table of Contents

★ Practice Test 1	_____	13
★ Practice Test 2	_____	29
★ Practice Test 3	_____	44
Practice Test Answer Keys	_____	58
Practice Test Answers and Explanations	_____	61

1) Jordan invests \$2000 at a simple interest rate of 3.5% per year for 5 years. How much interest will he earn?

☐ A. \$70

☐ C. \$350

☐ B. \$175

☐ D. \$700

2) A student guessed that the temperature would be $68^{\circ}F$, but it was actually $75^{\circ}F$. What is the percent error?

☐ A. 7%

☐ C. 10.2%

☐ B. 90.7%

☐ D. 9.3%

3) Expand: $6(m - 1)$

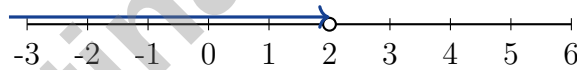
☐ A. $6m - 6$

☐ C. $m - 6$

☐ B. $6m - 1$

☐ D. $6m + 6$

4) If the solution to an inequality is all numbers less than 2, which circle and arrow are needed?



☐ A. Closed circle at 2 pointing right

☐ C. Open circle at 2 pointing left

☐ B. Open circle at 2 pointing right

☐ D. Closed circle at 2 pointing left

5) A rectangular patio has area $36m + 54$ square feet. If the width is 18 feet, what is the length?

☐ A. $2m + 3$

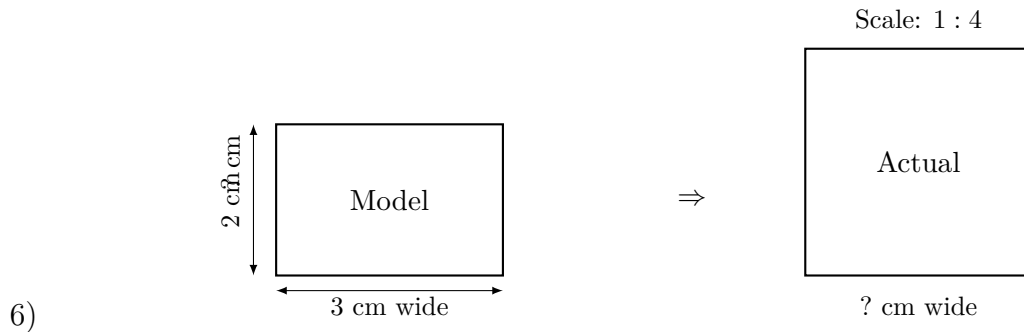
☐ C. $3m + 3$

☐ B. $2m + 54$

☐ D. $36m$



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If the scale factor is 1 : 4, what are the actual dimensions?

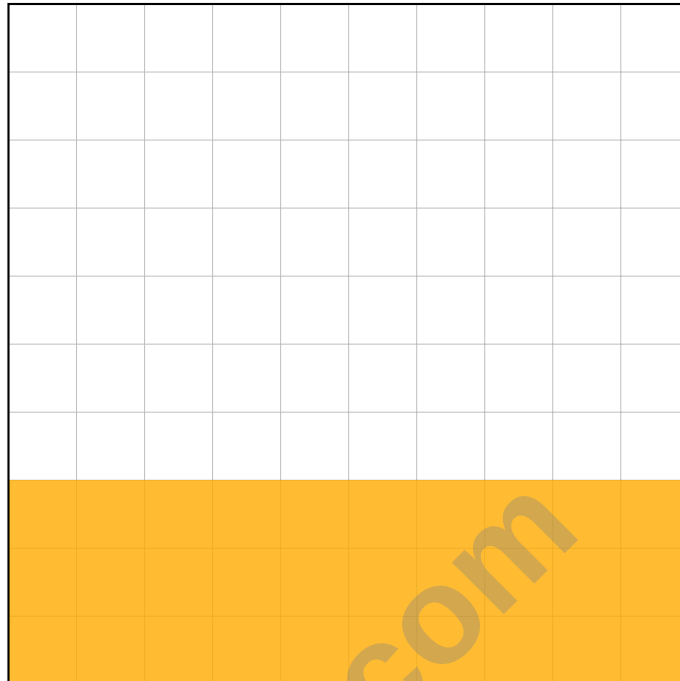
☐ A. 12 cm × 10 cm

☐ C. 7 cm × 6 cm

☐ B. 0.75 cm × 0.5 cm

☐ D. 12 cm × 8 cm





7) Percent grid: 30 squares shaded of 100

The percent grid shows 30 shaded squares. What percent is shaded?

☐ A. 20%

☐ C. 40%

☐ B. 50%

☐ D. 30%



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1) Which inequality represents “twice a number is at most 30”?

☐ A. $2x > 30$

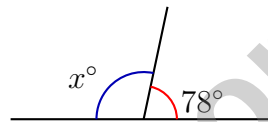
☐ C. $x \leq 30$

☐ B. $2x \leq 30$

☐ D. $2x < 30$

2) A video game costs \$35. After a 20% price increase, what is the new cost?

3)



Two lines intersect. One angle measures 78° . The angle adjacent to this angle is x . What is x ?

☐ A. 12°

☐ C. 102°

☐ B. 78°

☐ D. 180°

4) Point $R(2, 5)$ is reflected over the line $y = x$. What are the new coordinates?

☐ A. $(5, 2)$

☐ C. $(2, -5)$

☐ B. $(-2, -5)$

☐ D. $(-5, -2)$

5) In a map, a scale of 1 inch = 50 miles is used. On the map, two cities are 3.5 inches apart. What is the actual distance between the cities?

☐ A. 150 miles

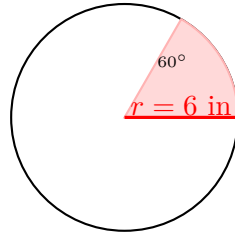
☐ C. 200 miles

☐ B. 175 miles

☐ D. 350 miles



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6)

A sector of a circle has a central angle of 60° and radius 6 inches. What is its area?
 (Hint: sector area = $\frac{\text{angle}}{360^\circ} \times \pi r^2$. Use $\pi \approx 3.14$.)

☐ A. 9.42 in^2

☐ C. 37.68 in^2

☐ B. 18.84 in^2

☐ D. 56.52 in^2

- 7) A consultant charges clients a base rate of \$100 per hour plus a 10% project management fee on the total billable hours. For a 10-hour project, what is the total cost?

- 8) A student mistakenly calculates the volume of a cylinder with $r = 3 \text{ m}$ and $h = 4 \text{ m}$ by using the formula $V = 2\pi rh$ instead of $V = \pi r^2 h$. Which is the correct volume?
 Use $\pi \approx 3.14$.

☐ A. 75.36 m^3

☐ C. 150.72 m^3

☐ B. 113.04 m^3

☐ D. 226.08 m^3



- 1) A bank statement shows the following transactions in one week:

Transaction	Amount
Starting balance	\$2 500
Debit card purchase	−\$45
Direct deposit (paycheck)	+\$800
ATM withdrawal	−\$100

What is the ending balance?

- ☐ A. \$2 145 ☐ C. \$3 155
☐ B. \$2 255 ☐ D. \$3 255
- 2) A proportional relationship has an equation $y = 2.2x$. What is the value of y when $x = 5$?

- 3) A spinner has 12 equal sections colored: 4 green, 5 blue, 3 red. Find $P(\text{blue or red})$.

- ☐ A. $\frac{3}{12}$ ☐ C. $\frac{2}{3}$
☐ B. $\frac{5}{12}$ ☐ D. $\frac{7}{12}$
- 4) A construction contractor charges a \$500 deposit plus \$75 per hour of labor. A job takes 20 hours. What is the total cost?

- ☐ A. \$1, 200 ☐ C. \$1, 800
☐ B. \$1, 500 ☐ D. \$2, 000



- 5) A savings account grows from \$600 to \$684 in one year with annual compound interest. What is the interest rate?
- ☐ A. 10% ☐ C. 14%
- ☐ B. 12% ☐ D. 15%
- 6) A product's value increased from \$200 to \$275. What is the percent increase?
- ☐ A. 27.3% ☐ C. 75%
- ☐ B. 275% ☐ D. 37.5%
- 7) Factor: $-10x - 20$
- ☐ A. $-10(x + 2)$ ☐ C. $-10(x - 2)$
- ☐ B. $10(x - 2)$ ☐ D. $10(-x - 2)$
- 8) A bike normally costs \$200. During a sale, it is marked down by 35%. What is the sale price?
- ☐ A. \$235 ☐ C. \$65
- ☐ B. \$165 ☐ D. \$130
- 9) The additive inverse (opposite) of -14 is which value?
- ☐ A. 14 ☐ C. 0
- ☐ B. -14 ☐ D. $\frac{1}{14}$
- 10) Simplify: $11a - 6a + 2a$
- ☐ A. $7a$ ☐ C. $9a$
- ☐ B. $19a$ ☐ D. $5a$



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Pennsylvania PSSA Grade 7 Practice Test Answer Keys**How to use this section with a Grade 7 student:**

1. check the answer first and circle any item that needs another look
2. retry the problem with fresh work before reading the explanation
3. write one short lesson learned from each missed or guessed item

A strong review routine turns every correction into a sharper plan for the next Pennsylvania PSSA practice test.

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Practice Test Answers and Explanations

Practice Test 1 Answers and Explanations

- 1) **Choice C is correct.** (7.RP.3) $I = 2000 \times 0.035 \times 5 = \350 . Convert 3.5% to 0.035.
- 2) **Choice D is correct.** (7.RP.3) Percent error = $\frac{|68-75|}{75} \times 100\% = \frac{7}{75} \times 100\% \approx 9.3\%$.
- 3) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute 6: $6(m) - 6(1) = 6m - 6$.
- 4) **Choice C is correct.** (7.EE.4b) "Less than 2" means < 2 (strict), so use an open circle at 2. The arrow points left toward smaller numbers.
- 5) **Choice A is correct.** (7.EE.1-7.EE.2) Factor: $36m + 54 = 18(2m + 3)$. Length = $\frac{18(2m+3)}{18} = 2m + 3$.
- 6) **Choice D is correct.** (7.RP.1-7.RP.3) Multiply each model dimension by scale factor 4: $3 \times 4 = 12$ cm; $2 \times 4 = 8$ cm.
- 7) **Choice D is correct.** (7.RP.3) $\frac{30}{100} = 30\%$ of the grid is shaded.
- 8) **Choice D is correct.** (7.RP.3) From row 1: markup is $56 - 40 = \$16$ on cost of \$40, a 40% markup. For cost \$50: markup = $0.40 \times 50 = \$20$, so selling price = $50 + 20 = \$70$.
- 9) **Choice A is correct.** (7.NS.1b) Model: $5 + (-3)$. Three positive and three negative chips cancel, leaving 2 positive chips (representing +2).
- 10) **The correct answer is -17.** (7.NS.1-7.NS.3) The new balance is $-5 - 12 = -17$. You now owe 17 dollars.
- 11) **Choice A is correct.** (7.EE.1) All terms are like terms with variable xy . Combine: $(3 + 5 - 2)xy = 6xy$.
- 12) **Choice C is correct.** (7.G.4-7.G.6) Base: $12^2 = 144$ cm². Four triangles: $4 \times \frac{1}{2}(12)(10) = 4 \times 60 = 240$ cm². Total: $144 + 240 = 384$ cm².
- 13) **Choice A is correct.** (7.SP.5-7.SP.8) Before running a simulation, identify which outcomes meet the criteria: (2, 6), (3, 5), (3, 6), (4, 4), (4, 5), (4, 6), (5, 3), (5, 4), (5, 5), (5, 6), (6, 2), (6, 3), (6, 4), (6, 5), (6, 6) — that is 15 outcomes out of 36.
- 14) **Choice D is correct.** (7.RP.1-7.RP.3) The unit-rate point (1, 0.45) indicates approximately 0.45 kg per pound.
- 15) **Choice C is correct.** (7.RP.3) Returns: $\frac{1}{10} \times 500 = 50$. Kept: $500 - 50 = 450$. Note: $\frac{1}{10} = 0.1 = 10\%$.
- 16) **The correct answer is \$3.** (7.RP.1-7.RP.3) Store A costs $2 \div \frac{2}{5} = 5$ dollars per pound. Store B costs $2.25 \div \frac{3}{4} = 3$ dollars per pound, so the lower price is \$3.
- 17) **The correct answer is 15.** (7.RP.1-7.RP.3) Ratio: $30/2 = 15, 60/4 = 15, 90/6 = 15$. Hourly wage is \$15; constant of proportionality is $k = 15$.
- 18) **Choice C is correct.** (7.RP.3) Time in the market is a key factor in investment returns. Starting early maximizes compound growth. Options A, B, and D are false or misleading.
- 19) **Choice B is correct.** (7.NS.1-7.NS.3) Starting at -2 and moving right 3 units: $-2 + 3 = 1$.
- 20) **Choice D is correct.** (7.EE.1-7.EE.2) Substitute: $(3)^2 + 2(3)(2) = 9 + 12 = 15$.
- 21) **Choice A is correct.** (7.EE.1-7.EE.2) Distribute the negative: $3f + 11 - f + 2 = (3f - f) + (11 + 2) = 2f + 13$.
- 22) **The correct answer is C,D.** (7.SP.1-7.SP.4) The total amounts are not given, so A and B cannot be determined from the percentages alone. Region Y has 50% indoor and 50% outdoor use, so C is correct. Region Y's outdoor percentage (50%) is higher than Region X's outdoor percentage (40%), so D is correct.
- 23) **Choice A is correct.** (7.EE.3-7.EE.4) $5x - 10 + 10 = 40 + 10 \Rightarrow 5x = 50$. Then divide by 5: $x = 10$.
- 24) **Choice A is correct.** (7.EE.4b) Subtract 7: $2x \geq -8$. Divide by 2: $x \geq -4$.
- 25) **Choice A is correct.** (7.G.1-7.G.5) Blueprint 1 at scale 1:4 ft: actual hallway is $2.5 \times 4 = 10$ ft and $8 \times 4 = 32$ ft. Blueprint 2 shows the same hallway (10 ft $\times$ 32 ft) as 5×16 in. Scale of B: $10 \text{ ft} \div 5 \text{ in} = 2 \text{ ft per inch}$, or 1 in : 2 ft. Ratio check: scale B (2 ft/in) is half scale A (4 ft/in), so drawing B should be $4 \div 2 = 2 \times$ larger: B is 5×16 in vs A is 2.5×8 in. Correct!
- 26) **Choice C is correct.** (7.G.4-7.G.6) Distance = circumference = $2\pi r = 2 \times 3.14 \times 0.5 = 3.14$ m.
- 27) **Choice B is correct.** (7.SP.1-7.SP.4) Selecting items at regular intervals (every hour) is systematic sampling, a valid method for creating unbiased samples.
- 28) **Choice B is correct.** (7.RP.1-7.RP.3) Table B has constant ratio: $\frac{6}{2} = 3, \frac{12}{4} = 3, \frac{18}{6} = 3$. Table A is not proportional ($\frac{3}{1} = 3$ but $\frac{7}{3} \neq 3$).



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Hi, Progress Maker!

◇ You have done more than complete a set of tests. You have rehearsed the habits that make Grade 7 math feel less surprising. ◇

★ **Remember this:** Progress is not always loud. Sometimes it looks like fewer careless errors, clearer work, better pacing, and more confidence when a problem is unfamiliar. You practiced across 3 full Grade 7 practice tests, and that repeated effort matters. ★

Signs of Growth

- **Clear Work:** Your steps are easier to follow.
- **Better Pacing:** You know when to move on and return.
- **Stronger Checks:** You catch mistakes earlier.
- **Calmer Thinking:** You know what to try next.

Grade 7 test-day tip: Keep one short list of mistakes you often make, then check that list before each practice session.

If you want to share something or ask a question, please email me at jay@testinar.com.

Jay Daie

Your Growth Coach

PRACTICE TODAY. SUCCEED TOMORROW!

This book includes **3** full-length Math practice tests and **2** online tests to help Grade 7 students build confidence, strengthen skills, and excel on standardized assessments.

Each practice test is carefully crafted to reflect the latest standards and includes a variety of question types, realistic test conditions, and detailed answer explanations.

Perfect for classroom use, homework, test preparation, and extra practice at home.



THIS BOOK INCLUDES:

3 Full-Length Printed Tests

2 Online Practice Tests

 Detailed Answers & Explanations



MORE PRACTICE. GREATER RESULTS.

Give your child the tools to build strong math skills, confidence, and a positive attitude toward learning.

WHAT YOU'LL GAIN



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Practice regularly to feel prepared and test-ready.



Strengthen Math Skills

Develop key math concepts and problem solving abilities.



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Apply your knowledge and achieve your best score!

TOPICS COVERED

- ✓ Ratios & Proportions
- ✓ The Number System
- ✓ Expressions & Equations
- ✓ Geometry
- ✓ Percents & Decimals
- ✓ Statistics & Probability
- ✓ Data Analysis
- ✓ Measurement & Conversions
- ✓ Algebraic Thinking
- ✓ And More!



2 ONLINE TESTS

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